

WHAT IS CLAIMED IS:

1. An automatic water filtration and purification system for light industrial and home installations, having continuous water flow to a fixture while simultaneously and automatically regularly flushing and cleaning in-path filter media, comprising, in combination:

at least one filter to remove impurities from a water in-path through-put;

a cleaner coupled to the at least one filter to clean the at least one filter; and

a controller coupled to the at least one filter to regulate automatic operation of the cleaner;

wherein continuous operation of water flow to the fixture is essentially uninterrupted during the operation of the cleaner and the controller.

2. The automatic water filtration and purification system in accordance with Claim 1 wherein the at least one filter comprises at least two filters coupled in series.

3. The automatic water filtration and purification system in accordance with Claim 1 further comprising an ultraviolet purification assembly coupled to the at least one filter.

4. The automatic water filtration and purification system in accordance with Claim 1 wherein the cleaner comprises a flushing valve coupled to each of the at least one filter

5. The automatic water filtration and purification system in accordance with Claim 4 wherein the cleaner further comprises a valve filter coupled downstream of the flushing valve.

6. The automatic water filtration and purification system in accordance with Claim 1 wherein the controller comprises at least one programmable timer.

7. The automatic water filtration and purification system in accordance with Claim 1 further comprising a quick-disconnect coupling connected to each of the at least one filter.

8. An automatic water filtration and purification system for light industrial and home installations, having continuous water flow to a fixture while simultaneously and automatically regularly flushing and cleaning in-path filter media, comprising, in combination:

at least one filter assembly having at least one flushing port;

an ultraviolet lamp assembly coupled in series with the at least one filter assembly;

a flushing control valve coupled to the at least one flushing port of the at least one filter assembly;

a programmable control unit connected to the flushing control valve; and

a bypass valve coupled to the at least one filter to divert water to the fixture without passing through the automatic water filtration and purification system.

9. The automatic water filtration and purification system in accordance with Claim 8 further comprising a valve filter coupled downstream of the flushing control valve.

10. The automatic water filtration and purification system in accordance with Claim 8 wherein the programmable control unit comprises a sequentially energized flushing control valve timer electrically connected to the flushing control valve.

11. The automatic water filtration and purification system in accordance with Claim 18 wherein the at least one filter assembly comprises:

a course filter assembly coupled to the bypass valve; and  
a fine filter assembly coupled to the course filter assembly.

12. The automatic water filtration and purification system in accordance with Claim 8 further comprising an air bleed valve coupled to the bypass valve to remove air from the automatic water filtration and purification system.

13. An automatic water filtration and purification system for light industrial and home installations, having continuous water flow to a fixture coupled thereto, while simultaneously and automatically regularly flushing and cleaning in-path filter media, comprising, in combination:

a bypass valve coupled to a water line for diverting water to the fixture without passing through the automatic water filtration and purification system;

a course filter assembly coupled to the bypass valve;

a fine filter assembly coupled in series to the course filter assembly;

an ultraviolet lamp assembly coupled in series with the at fine filter assembly;

a flushing control valve coupled to a flushing port located on the course filter assembly and the fine filter assembly; and

a programmable control unit connected to the flushing control valves wherein the programmable control unit comprises a sequentially energized flushing control valve timer electrically connected to the flushing control valves for automatically and regularly flushing and cleaning the automatic water filtration and purification system.

14. The automatic water filtration and purification system in accordance with Claim 13 further comprising a valve filter coupled downstream of the flushing control valve.

15. The automatic water filtration and purification system in accordance with Claim 14 further comprising an air bleed valve coupled to the bypass valve to remove air from the automatic water filtration and purification system.